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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/735,668

12/20/2000

Rodolfo I. Gamboa

TI-29518

5377

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03/08/2007

TEXAS INSTRUMENTS INCORPORATED

P O BOX 655474, M/S 3999

DALLAS, TX 75265

EXAMINER

FARAHANI, DANA

ART UNIT

PAPER NUMBER

2891

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

03/08/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.		Applicant(s)	
	09/735,668		GAMBOA, RODOLFO I.	
	Examiner		Art Unit	
	Dana Farahani		2891	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12/8/06.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 and 21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17, 21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12/20/00 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119.

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION.

Drawings

1. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because the drawings are not suitable for reproduction. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1- 4, 7-10, 14-15 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Frederickson et al, hereinafter Frederickson (US Patent 5,955,888).

Regarding claims 1, and 21, Frederickson discloses in figure 6A-6B, a test socket comprising:

a test socket for a semiconductor device 100 (fig. 1) having a plurality of pins 126,

a body 630 for receiving a semiconductor device, the body having an integrally formed guidepost 647/680, 682 and a chamfered impact base 678;

a floating base (650, 640) disposed within the body, the floating base coming into

contact with the semiconductor device and providing movement of the semiconductor device to alleviate unwanted pressure from the plurality of pins;

a plurality of pogo-pins 620 adjacent to one another, each pogo-pin comprising a cylindrical chamber 622 and a plunger 624, one end for directly contacting a pin of the semiconductor device and the other end for contacting external test equipment, and a back panel 670 removably attached to the body.

Regarding claim 2, a Quad Flat Pack (QFP) may be tested by the test socket (see Frederickson, column 1, line 22).

Regarding claim 3, the guide post comprises a first portion (the left side 680) having a substantially rectangular shape, a top edge, and a first side (the left edge thereof); and

a second portion (682) having a substantially triangular shape and having a first leg (the vertical right portion) at a ninety degree angle to a second leg (the very bottom portion), the first leg integrally connected to the first portion along its first side.

Regarding claim 4, the chamfered impact base extends at an angle between zero and seven degrees below the horizontal axis of the crown top of the plurality of the pogo pins, as can be seen in the figure.

Regarding claim 7, the back panel has through holes 676 to receive the plurality of pogo pins

Regarding claim 8, screws are utilized to attach the back panel to the body (see column 7, lines 15-20).

Regarding claims 9 and 10, the plurality of pogo pins each comprise a plunger and an internal spring (628 of figure 8) exerting force upon the plunger.

Regarding claim 14, there are plurality of pogo pins.

Regarding claim 15, the guidepost 680 has a slanted groove 682.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 5, 6, and 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frederickson.

Regarding claims 5 and 6, the floating base comprises a spring 690; and a base component 650 substantially square in shape and having a cylindrical shaft underneath (where the spring goes through) to receive the spring. Although, the reference does not expressly disclose the spring comprised of metallic material and the base component is plastic, it would have been obvious to one of ordinary skill in the art at the time of the invention to make the spring from a metal/steel alloy and the component from plastic, since they are well known material used for a non-conductive component such as the base component, and metal is normally used as a material for a spring. See *In re Leshin*, 125 USPQ for the proposition that it is within the general skill of a worker in the art to select a known material for an intended use.

Regarding claims 11-13, Frederickson discloses the plurality of pogo pins are conductive (see column 6, lines 39-41). Although, it does not disclose gold being used as the material for the

Art Unit: 2891

pogo pins, it would have been obvious to one of ordinary skill in the art at the time of the invention to make the pogo pins from gold because of its excellent conductivity.

6. Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frederickson, as applied to claim 1 above, and further in view of Vinther et al., hereinafter Vinther (US Patent 6,377,059).

Frederickson discloses the claimed invention, as discussed above, except for the plurality of pigo pins have four pointed ends, and a pitch of 0.14 mm.

Vinther discloses such contact, a test probe with a crown of four pointed ends, in figure 12. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to make the pogo pins of the structure of Frederickson with four pointed ends in order to make a good contact. Although Vinther does not disclose the pitch of four pointed ends, it would have been obvious to one of ordinary skill in the art at the time of the invention to adjust the pitch of the end portion, to correspond the pogo pins to various contact sizes of the chips to be tested.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dana Farahani whose telephone number is (571)272-1706. The examiner can normally be reached on M-F 9:00AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bill Baumeister can be reached on (571)272-1722. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2891

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DF



B. WILLIAM BAUMEISTER

SUPERVISORY PATENT EXAMINER

TECHNOLOGY CENTER 2800